

Title (en)

Surface waveguide having a tapered region and method of forming

Title (de)

Oberflächenwellenleiter mit konischem Bereich und Verfahren zur Herstellung

Title (fr)

Guide d'ondes de surface ayant une région conique et procédé de formation

Publication

EP 2720073 A2 20140416 (EN)

Application

EP 13188394 A 20131011

Priority

US 201261712587 P 20121011

Abstract (en)

A method for forming a waveguide (200) having a thin-core region, a thick-core region, and a transition region of tapered thickness between them is disclosed. The method comprises forming a lower core layer (214) of a first material on a lower cladding (212), forming a thin central core layer (216) of a second material on the first core layer (214), forming an upper core layer (218) of the first material on the central core layer (216), and etching the upper core layer (218) in an etchant such that it is removed from the thin-core region and its thickness monotonically changes from its as-deposited thickness (t4) to extinction across the transition region, where the central core layer (216) protects the lower core layer (214) from exposure to the etchant.

IPC 8 full level

G02B 6/14 (2006.01); **G02B 6/30** (2006.01)

CPC (source: EP US)

G02B 6/14 (2013.01 - US); **G02B 6/305** (2013.01 - EP US)

Citation (applicant)

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- US 201213451957 A 20120420
- "Spotsize converters for rib-type silicon photonic wire waveguides", PROCEEDINGS OF THE 5TH INTERNATIONAL CONFERENCE ON GROUP IV PHOTONICS, 17 September 2008 (2008-09-17), pages 200 - 202
- "Low loss shallow-ridge silicon waveguides", OPTICS EXPRESS, vol. 18, no. 14, 2010, pages 14474 - 14479
- "Low-Loss Compact Arrayed Waveguide Grating with Spotsize Converter Fabricated by a Shadow-Mask Etching Technique", ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE (ETRI) JOURNAL, vol. 27, no. 1, 2005, pages 89 - 94

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Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2720073 A2 20140416; EP 2720073 A3 20140514; EP 2720073 B1 20170419; KR 102057738 B1 20191219; KR 20150042687 A 20150421; US 2014105556 A1 20140417; US 9020317 B2 20150428

DOCDB simple family (application)

EP 13188394 A 20131011; KR 20140062176 A 20140523; US 201314051715 A 20131011